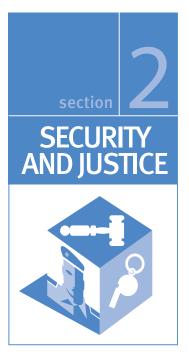
USES OF U.S. **APPROPRIATIONS**

section

SIGIR reports here on the uses of the \$44.5 billion in U.S. appropriated funds within these reconstruction programs:

- Security and Justice
- Provincial Reconstruction Teams
- Capacity Development
- Electricity
- Oil and Gas
- Water
- Health Care
- Transportation and Communications
- Democracy
- Economic Development
- Refugees, Human Rights, and Education





More than \$17 billion of U.S. reconstruction funds have been appropriated to train, equip, supply, and provide for the infrastructure support of the ISF. The FY 2007 Supplemental provided 60.6% of Iraq reconstruction-related funds to the Iraq Security Forces Fund (ISFF).

The plan to provide for ISF readiness involved four phases of development:

- partnership between MNF-I and ISF
- Iraqi army-led operations and clearing of areas of insurgency
- Provincial Iraqi Control (PIC): Iraqi authorities assume control and responsibility for their respective provinces
- security self-reliance: the GOI operates and sustains security forces through the organs of the state⁴⁶

Escalating levels of violence and early ISF "lead" failures challenged the execution of this strategy. Increasing the end-strength of Iraqi army and police forces is essential to counter the insurgent and criminal activities. But threats to the integrity of the ISF force structure—including combat attrition, liberal leave arrangements, and sectarian and militia infiltration—have placed significant strain on the capacity of ISF to meet expanding end-state force requirements.

In July 2007, the President's *Initial Benchmark Assessment* stated that the GOI "has made satisfactory progress toward establishing supporting political, media, economic, and services committees in support of the Baghdad Security Plan,"⁴⁷ by establishing the Executive Steering Committee and related subcommittees. The Report further noted that the Administration will "continue to monitor and engage with the committees to produce a satisfactory effect over the next 60 days."⁴⁸

Transition to Iraqi Control

Progress in the Coalition's efforts to transition responsibility to the GOI has been slower than anticipated. This quarter, Missan became the fourth province to transfer to provincial Iraqi control.⁴⁹

Two other provinces that DoD had anticipated would have attained PIC status "by the spring of 2007"⁵⁰—Qadissiya and Ninewa—have not met the conditions required for transfer. On May 30, 2007, Dahuk, Erbil, and Sulaymaniyah were transitioned to "Regional Iraqi Control," under the Kurdistan Regional Government (KRG).⁵¹

In its most recent report on Iraq's stability and security, DoD revised its forecast for transferring security control. DoD now expects



TRANSFER RATE OF FORWARD OPERATING BASES

9010 RPT	Total FOBs	FOBs Transferred	Percent FoBs Transferred
May 2006	NA	34	_
Aug 2006	110	48	43.6%
Nov 2006	110	52	47.3%
Mar 2007	NA	NA	_
Jun 2007	122	61	50.0%

TABLE 2.4

transition of all Iraqi provinces to PIC status "no later than March 2008." ⁵²

The process of transferring Forward Operating Bases (FOBs) to Iraqi control also has been affected by ongoing security operations. DoD reports that MNF-I turned over some FOBs to the Iraqis this quarter. But MNF-I also has established some new FOBs during 2007 to support the Baghdad Security Plan and "other elements in Iraq, including Coalition partners, Provincial Reconstruction Teams, Transition Teams, other supporting entities, and the Department of State." As shown in Table 2.4, between November 2006 and June 2007, the number of FOBs in Iraq increased by 10.9%, from 110 to 122. 54

U.S. Support

The security and justice sector has received the largest portions of the \$44 billion in U.S. funds for Iraq's relief and reconstruction—more than \$17 billion. For the allocations of funding to security and justice by source, see Figure 2.17.

To date, \$10.82 billion of the ISFF has been allocated to help meet the training and equip-

ment requirements of the ISF, of which, 61% has already been expended. The security and justice sector was allocated 34% of the \$18.44 billion in IRRF 2, and more than 93% of these IRRF funds have been expended. Of the total CERP funding for Iraq reconstruction, 7% was allocated to security and justice, and approximately 42% of these funds had been expended by the end of this quarter. For the status of the four funding streams, see Figure 2.18.

The ISFF funds part of the training, equipping, and fielding of the ISF. IRRF funding focused on large construction projects, but it has also provided funding for non-construction activities, such as arming the New Iraqi Army, training Iraqi police, assisting war victims, and supporting witness-protection programs. ESF has mainly funded infrastructure security efforts, and CERP has focused on condolence payments.

RULE-OF-LAW INITIATIVES

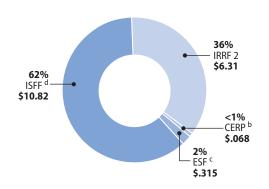
Several initiatives are in progress to support the rule of law in Iraq and to strengthen the legal code, police force, judicial system, and correctional system. MNF-I, with support



Figure 2.17

ALLOCATIONS TO SECURITY AND JUSTICE

\$ Billions, % of \$17.51 Billion Sources: DoD, Secretary of the Army Update (7/8/2007); DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); ITAO,^a Weekly Status Report (6/26/2007); IRMS, ESF Cost to Complete (7/5/2007); USAID, Activities Report (7/12/2007)



Note: Numbers are affected by rounding a. By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.

b. Appropriation detail at the sector and subsector level for CERP is currently unavailable; therefore, the percentages for CERP are calculated using FY 2006 and FY 2007 dollars obligated. c. FY 2006 Supplemental Funds (P.L.109-234). d. FY 2005, FY 2006, and FY 2007.

Figure 2.18

OBLIGATIONS FOR SECURITY AND JUSTICE

\$ Billions, \$15.31 Billion Total Sources: DoD, Secretary of the Army Update (7/8/2007); DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); IRMS, ESF Cost to Complete (7/5/2007)



Note: Numbers are affected by rounding. a. FY 2005, FY 2006 and FY 2007. b. FY 2005 and FY 2006. c. FY 2006 Supplemental Funds (P.L. 109-234). from DoJ and DoS, has established the Law and Order Task Force to increase, among other things, the capacity of the Central Criminal Court of Iraq (CCCI).55

Security problems continue to hinder progress of the rule-of-law effort. For example, attacks and death threats have made some Iraqi judges reluctant to try cases related to terrorism or the insurgency. MNF-I thus established a Rule of Law Complex (ROLC) in Baghdad to "provide a secure location combining police, courts, forensic labs and corrections functions, and judicial housing and detention facilities."56

This quarter, DoD reported that the first judicial proceeding at the ROLC was conducted before an Iraqi investigative judge on April 2, 2007. Nine Iraqi judges and 15 support personnel have been appointed to staff the new court since then.⁵⁷ In addition, DoD assigned 67 judge advocates, paralegals, investigators, and intelligence officers to the Law and Order Task Force, scheduled to begin arrival on May 15, 2007.

ISFF

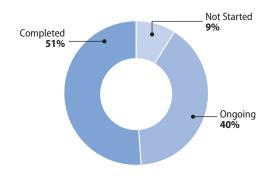
Of the 478 security projects funded by ISFF in FY 2005, FY 2006, and FY 2007, 51% are completed, and 9% have not started. For the status of ISFF projects, see Figure 2.19.



Figure 2.19

STATUS OF ISFF FY 2005, FY 2006, AND FY 2007 PROJECTS - SECURITY AND JUSTICE

TOTAL NUMBER OF PROJECTS: 478 Source: IRMS, ITAO* Rollup (6/29/2007)



Project Type	Not Started	Ongoing	Completed	Total
Infrastructure	33	127	122	282
Training and Operations	9	39	107	155
Sustainment		26	10	36
Equipment and Transportation		2	3	5
Total	42	194	242	478

Note: Numbers are affected by rounding. * By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.

Training, Equipping, and Fielding ISF

Although the Coalition has trained and equipped significant numbers of Iraqis, their capacity to conduct widespread counterinsurgency operations remains in question. As shown in Figure 2.20, the goals for required ISF end-state force levels have increased almost 225% above the initial estimates of the CPA's training programs. By the end of 2006, the number of trained forces met estimated end-state goals, and support efforts shifted to replacing force depletion and developing logistical capacities.⁵⁸ But in early 2007, overall force requirements were again increased to a goal of 385,000 trained ISF personnel.

This quarter, the number of trained and equipped ISF personnel increased by 22,100 to 353,100:

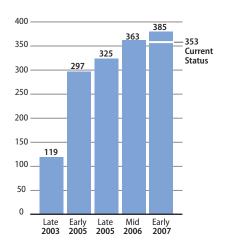
- 158,900 Iraqi Army, Navy, and Air Force personnel⁵⁹
- 194,200 police, highway patrol, and other Ministry of Interior officers⁶⁰

Figure 2.20

TRAINED AND EQUIPPED ISF PERSONNEL

Thousands

Sources: Statement of Work for Contract DABK01-03-R-0012, New Iraqi Army Training, June 9, 2003, p.4; CPA Update Briefing, Presidential Envoy to Iraq, September 2, 2003; DoD, "Measuring Stability and Security in Iraq," October 25, 2005; Former Commanding General of MNSTC-I, Statement for the House Armed Services Subcommittee on Oversight and Investigations on ISF, June 12, 2007.





Notwithstanding this extensive training, the Initial Benchmark Assessment questioned the capability of ISF units to operate independently, rating the GOI's progress as "unsatisfactory." The assessment stated that "the presence of Coalition partners and support remains necessary for ISF operations."61

Fielding and Equipping Trained Troops

As of May 14, 2007, 101 Iraqi Army (IA) combat battalions have become operational and are conducting operations at various levels of capability; 38 additional battalions are in the process.⁶² However, the actual present-for-duty number of Iraqi Army personnel continues to be lower than reported. DoD states that only 65% of authorized personnel are active on duty in fielded units at any given time.⁶³

To improve present-for-duty strength, MNSTC-I has funded training for 12,000 additional soldiers to bring combat unit levels to 110% of authorization. Initial training has already been completed for 10,300 of these new soldiers. In addition, MNSTC-I has funded the equipping of 18,000 new soldiers, who will serve as replacements for personnel losses.

Ministry of Defense forces are increasingly taking the lead in operations.⁶⁴ As of May 14, 2007, 9 Division Headquarters and 31 Brigade Headquarters had been assessed as capable of leading counter-insurgency operations, and 95 Iraqi Army battalions are now in the lead—up from 93 battalions in February. Although DoD reported last quarter that the Iraqi Ground Forces Command (IGFC) was expected to gain control of all ten Army divisions by June

2007,65 MNC-I still has operational control over the fifth and seventh divisions as of May 14, 2007, and a complete transition is now expected by November 2007.66

The logistics capability of the Ministry of Defense remains a key hindrance to the Iraqis' ability to assume the mission from the Coalition.67 SIGIR has identified as "at risk" the MNF-I goal of a sustainable and manageable logistics operation at the Ministry of Defense by January 2008;⁶⁸ the projected transition dates of some of the activities lapsed this quarter.

A joint Iraqi and Coalition forces board is evaluating progress to determine when the Ministry of Defense will assume maintenance tasks. The ministry has "agreed, in principle to fund the National Maintenance Contract through May 2008 using a [foreign military sales (FMS)] case."69 Contractors continue to be used to sustain 2 support battalions and 80 Garrison Support Units that provide logistics and support for divisions.

Other U.S.-funded initiatives include training and equipping the Strategic Infrastructure Battalions (SIBs)70 and partnering Coalition forces with Iraq's various energy infrastructure protection forces.⁷¹ The Ministry of Defense has established 17 SIBs, which go through a two-phased re-training and equipping process to transform into regular Iraqi Army battalions.⁷² This quarter, DoD reported that 13 SIBs are assessed to be capable of conducting operations side by side with Coalition forces.73



Training Iraqi Police

Iraqi police level forces trained include:

- Iraqi Police Service (IPS)
- National Police (NP)
- Facilities Protection Service (FPS)
- Directorate of Border Enforcement (DBE) and Directorate of Ports of Entry (POE)

IPS comprises the majority of the Ministry of Interior Personnel, reaching its manning target of 135,000 last quarter. Approximately 89% of authorized critical equipment has been distributed to IPS, and the rest will be delivered by the end of 2007. A significant portion of the equipment may no longer be serviceable because of combat loss and attrition.74 Accountability for equipment transferred to IPS may also affect its availability for security uses.75

In early 2004, the Coalition Police Assistance Transition Team (CPATT) was created to recruit, train, equip, and sustain IPS. However, because there was little distinction between Iraqi military forces and civilian rule-of-law police service, police were often trained by soldiers instead of police experts. As a result, some issues received less emphasis, including rule of law, human rights and treatment of suspects and prisoners, and policing in a democracy.76

Currently, 222 Police Transition Teams (PTTs) are operating throughout Iraq to assist the development of IPS. Each team has 12 to 15 members. Most of these members are military personnel, and two to four team members are civilian International Police Liaison Officers (IPLO), who provide civilian law enforcement expertise in technical aspects of criminal investigation and police station management.

In its March report to the Congress, DoD noted that, "costs and risk preclude deploying enough PTTs to cover all of Iraq's police stations; at any time, only 5 of Iraq's 18 provinces have sufficient PTTs to conduct the full range of activities ... [coaching, joint patrolling, evaluating performance]."77 Since March, the Ministry of Interior conducted an initiative to assess performance and effectiveness of Iraqi police stations, inspecting 44 of Baghdad's 47 stations.78

Managing the National Police has been a problem for the Ministry of Interior. Thus, in October 2006, MNSTC-I implemented a four-phased National Police Transformation Program to redirect the program toward police functions. Phase 2 includes emphases on human rights, rule of law, and police ethics.⁷⁹ As of June 27, 2007, approximately 26,300 members of the NP have completed retraining.80

The integrity of the NP, however, remains questionable. There have been numerous accusations that the NP are functioning as death squads, committing murder, torture, and kidnapping.81 In the past seven months, 7 of the 9 National Police Brigade Commanders and 16 battalion commanders have been replaced because of concerns about sectarian activities.82

Similar to the PTTs, 39 National Police Transition Teams (NPTTs) now support the



development of National Police units by mentoring, training, and facilitating communication with Coalition forces, and they assess the operational readiness of the National Police.83

The FPS protects infrastructure and facilities controlled by their respective 27 ministries. The FPS has also been a problem, with allegations of involvement in violent crimes and other illegal activity. Reform and centralization of FPS operations have been a stated objective since mid-2006.84 But the Ministry of Finance has not yet centralized funding with the Ministry of Interior, and thus, the status of FPS personnel and equipment apparently remains aligned with their respective ministries.85 Once consolidated, FPS personnel will total 98,000, down from 145,000 reported in 2006.86

IRRF PROJECTS

By the end of June 2007, approximately 89% of IRRF-funded projects had been completed in the security and justice sector. For a list of IRRF projects and status, see Figure 2.21.

IRRF has funded the construction and rehabilitation of border forts, fire stations, police stations, public-safety training academies, prisons and corrections facilities, courthouses, and witness-protection facilities.⁸⁷ Past SIGIR inspections have reviewed border forts, police stations, courthouses, and prisons, with mixed results. For example, SIGIR's inspection of the border forts at Sulaymaniyah found design flaws that the contractors subsequently corrected.

Construction at the Khan Bani Saad Correctional Facility was scheduled for completion in late November 2007; however, construction work at this project site was terminated on June 30, 2007 due to "impact of severe security issues and slow rate of progress by the contractor."88 The new construction of the Zarka Rehabilitation Center in Dahuk was completed on June 20, 2007.89

The 800-bed Nassriya Correctional Facility is estimated to be completed by November 2007, a month behind what was reported last quarter.90 In mid-2006, a SIGIR inspection of the facility found the quality of work and sustainability elements to be at acceptable levels, although project slippage and cost overruns resulted in the scope of work being reduced from a 4,400-inmate facility.91 Currently, the project is 62% complete.92

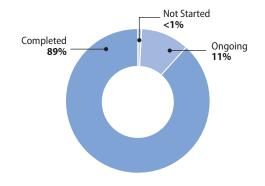
In addition to IRRF, the FY 2006 supplemental appropriated \$91.4 million in International Narcotics Control and Law Enforcement (INL) funding, of which \$82 million was for prison construction.93 According to GRD, which is responsible for overseeing construction of the prison projects, most projects are in the pre-award stage under this program.94 The last IRRF-funded security and justice construction project, the Al Hillah Courthouse, is scheduled to be completed in late August 2008.95

This quarter, SIGIR project assessments found that the Al Rasheed Brigade Base and the Iraqi Ministry of Defense Building met design standards and are both fully operational. Construction at the **Iraqi C-130 Base** also met contract requirements, but generator sustainability was a problem. For additional information on these assessments, see Section 3 of this Report.



Figure 2.21 **STATUS OF IRRF 2 PROJECTS - SECURITY AND JUSTICE** TOTAL NUMBER OF PROJECTS: 3,169

Sources: IRMS, ITAO* Rollup (6/29/2007); USAID, Activities Report (7/12/2007)



Note: Numbers are affected by rounding.
* By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.

Project Type	Not Started	Ongoing	Completed	Total
Marla Ruzicka Iraq War Victims Fund		169	1,104	1,273
Commanders Humanitarian Relief and Reconstruction	1	602	603	
Facilities Repair		9	426	435
Border Enforcement	2	1	270	273
Focused Stabilization		123	115	238
Establish New Iraqi Army	2	9	76	87
Iraqi Civil Defense Corps	4	7	72	83
Police Training and Assistance	9	5	60	74
Judicial Security and Facilities		6	31	37
Investigations of Crimes Against Humanity		1	34	35
Miscellaneous		2	7	9
Reconstruction of Detention Facilities		3	2	5
Witness Protection Program		4	1	5
National Security Communications Network			3	3
Penal Facilities		1	2	3
Public Safety Training and Facilities		1	2	3
Facilities Protection Services			2	2
Security and Law Enforcement			1	1
Total	17	342	2,810	3,169



ESF PROJECTS

Approximately 21% of the ESF FY 2006 Supplemental was appropriated to the security sector. USACE entered into an interagency agreement that fully committed the \$277 million programmed to Infrastructure Security Protection (ISP), which represents approximately 88% of ESF funds in this sector. Of the programmed amount for ISP, GRD has obligated approximately \$34.42 million and expended \$2.09 million.96 SIGIR has requested review of the problem presented by infrastructure security, and this ESF funding has helped address that problem.

Examples of ISP projects include:

- Exclusion Zones: protected areas to provide security to linear infrastructure, typically comprising fencing, setbacks, towers, berms, and ditches
- **Intrusion Detection Systems**: electronic sensors to detect perimeter breaches
- **Identity:** biometric vetting and creation of the Iraq National ID Card program, which provides a basic foundation to identify and vet Iraqi citizens and foreign nationals
- Infrastructure Hardening: such as chainlink fence, razor wire, guard towers, and barriers to better protect critical infrastructure against interdiction attempts and security breaches97

The ISP projects are typically designed for facilities hardening, improved lighting, communications, and improvements to forwardoperating bases used by the Iraqi Army to

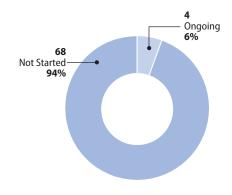
protect critical infrastructure.98 Most of these projects are for oil pipeline exclusion zones and electrical transmission towers and will be solicited, awarded, and administered by GRD.99 Figure 2.22 shows the status of ESF projects in the security and justice sector.

CERP

CERP FY 2006 and FY 2007 funds represent less than 1% of the total U.S. funds for security projects in Iraq and 7% of the total CERP FY 2006 and FY 2007 funds for reconstruction in Iraq.

As of early July, 1,019 of the 1,400 planned projects have been completed, and 381 are ongoing. CERP security projects include repairs of civic and cultural facilities, restoration of damage resulting from military opera-

Figure 2.22 STATUS OF ESF* PROJECTS - SECURITY AND JUSTICE **TOTAL NUMBER OF PROJECTS: 72** Sources: IRMS, ESF Cost to Complete (7/5/2007); IRMS, ESF Project Tracker (6/29/2007)



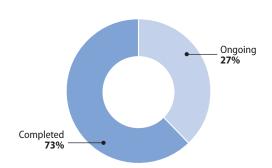
* Funded by the ESF FY 2006 Supplemental.



Figure 2.23

STATUS OF CERP FY 2006 AND FY 2007 PROJECTS - SECURITY AND JUSTICE

TOTAL NUMBER OF PROJECTS: 1,400 Source: MNC-I, Response to SIGIR (7/7/2007)



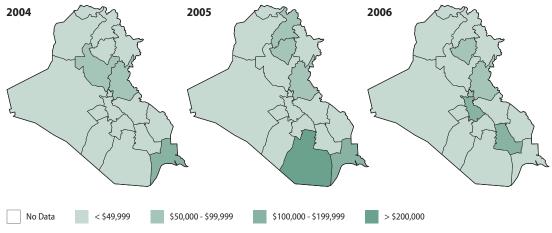
Project Type	Ongoing	Completed	Total
Condolence Payments	202	586	788
Rule of Law and Governance	68	237	305
Repair of Civic or Cultural Facilities	71	105	176
Repair of Damage from Military Operations	40	91	131
Total	381	1,019	1,400

tions, rule-of-law and governance projects, and condolence payments. Infrastructure-hard-ening projects were also completed last year using CERP funds. ¹⁰⁰ See Figure 2.23 on CERP-funded project status.

Since 2004, CERP security projects have averaged approximately \$40,000 per project.

From 2004 to 2006, the Baghdad province experienced an increase in the average value per security project from approximately \$18,000 in 2004 to approximately \$68,000 in 2006. Figure 2.24 shows the change in the average value per project for years 2004, 2005, and 2006.

Figure 2.24 **AVERAGE VALUE PER CERP SECURITY PROJECT BY GOVERNORATE**Source: IRMS, CERP Excel Workbook (6/29/2007)



Note:

Data is compiled using FY 2004, FY 2005, and FY 2006 CERP funds. The years indicated correspond to the actual start dates of the projects.



The Provincial Reconstruction Team (PRT) program is the most important nationwide capacity-building program in Iraq. It is a civilmilitary undertaking that provides a platform to help develop the capacity of Iraq's provincial governments.

A PRT has a mix of civilian and military staff, numbering from 30 to 100 members, including locally employed Iraqis.¹⁰¹ PRTs work to build provincial governance capacity in each of Iraq's 18 provinces and seek to facilitate the integration of the operational connections between the central government and the provincial governments.102

According to SIGIR's new audit of the PRT program, the mission of the PRTs is a fouryear effort, with the first two years focused on providing provincial governments necessary capacity development. As the provincial governments demonstrate increased capability to govern and manage their security environment, the PRT mission will transition to a more traditional USAID training program focused on developing governance capacity below the provincial level. 103 For more information about SIGIR's audit of the PRT expansion program, see Section 3.

Embedded PRTs

The President's January 2007 plan to surge the number of PRTs in conjunction with the military surge was implemented this quarter. 104 In mid-April 2007, an additional ten PRTs were deployed,105 and full staffing of civilian personnel for the new PRTs is anticipated by December 2007.¹⁰⁶ As of July 12, 2007, approximately half of the scheduled 300 additional PRT personnel have been deployed.¹⁰⁷

The original ten PRTs continue to operate in permanent locales at the provincial level. The new PRTs, however, are mobile units, embedded within Brigade Combat Teams (BCTs) and working at the district and municipal levels.108 The embedded PRTs (ePRTs) have a current primary mission of supporting counterinsurgency operations. 109 They include four core members: team leader, senior development specialist, civil affairs officer, and bilingual-bicultural adviser.

This embedded structure provides organic security for the ePRTs, allowing them to operate in more difficult security environments.110 The first ten ePRTs were deployed to unstable, yet strategically significant, areas: six in Baghdad, three in Anbar, and one in northern Babylon.111

In June 2007, the decision was made to add four additional ePRTs-three in Baghdad, one in southern Diyala—to support arriving



BCTs. Plans are evolving to embed the Wassit Provincial Support Team members in a brigade headquarters in Kut.¹¹² These developments will increase the total number of PRTs to 25 (10 original PRTs, 10 ePRTs, and the recently added 5 ePRTs), with a combined staff of about 700.¹¹³

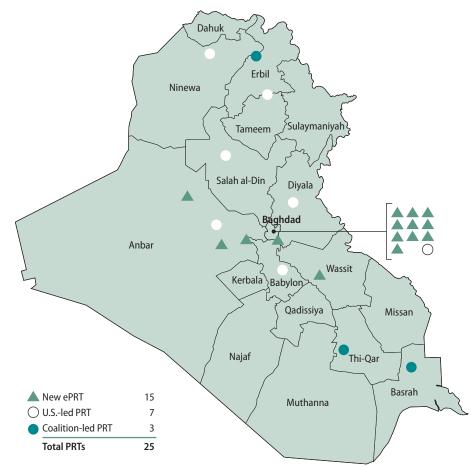
The expanded PRT program will "double the U.S. civilian presence in the provinces and decentralize efforts to accelerate transition to Iraqi self-reliance." Figure 2.25 shows the location of the PRTs and ePRTs throughout Iraq.

Figure 2.25

PROVINCIAL RECONSTRUCTION TEAM (PRT) PROGRAM EXPANSION

Source: SIGIR analysis of MNC-I data, as reported in SIGIR Audit 07-014,

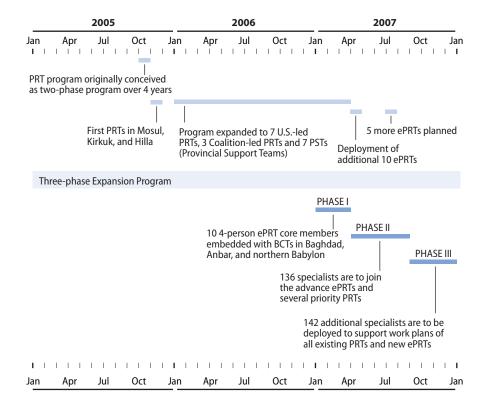
"Status of the Provincial Reconstruction Team Program Expansion in Iraq," July 2007.



PRT PROGRAM TIMELINE

Source: SIGIR Audit 07-014, "Status of the Provincial Reconstruction Team Program Expansion in Iraq," (July 2007)





PRT Challenges

SIGIR previously reported that PRTs faced challenges in resources and staffing. DoS is introducing a different assignment cycle to address the staffing problem. The DoS Director of Human Resources stated on June 19, 2007, "In order to continue to effectively meet the challenge we face in staffing Embassy Baghdad and the Iraq PRTs with qualified officers, [DoS has] introduced a first-ever, country-specific, special assignments cycle for Iraq. This new cycle will ensure that we once again fully staff our mission in Iraq for next year...before any other Foreign Service staffing decisions are made."115

Additionally, the three-phase expansion program has a plan for the timing of the staffing of PRTs. Figure 2.26 provides an overview of the PRT program in Iraq and shows the timeline of staffing of PRTs throughout the three phases of the PRT expansion program.

As of July 20, 2007, DoD deployed 70 specialists for the second phase. DoD plans to deploy an additional 34 specialists by the end of August 2007. USAID, the U.S. Department of Agriculture (USDA), and DoS plan to have in place an additional 32 specialists by September.116

Additional staffing challenges have emerged with the transition of PRT support responsibilities from IRMO to the Office of Provincial Affairs (OPA), which has oversight of the PRTs. The Embassy has had difficulty staffing critical positions and establishing continuity during the transition.117 SIGIR recommended that OPA develop a workforce plan to fill vacancies of critical staff managing the PRT program. 118

SIGIR's audit on the PRT program reported that measuring the effectiveness of the PRTs remains a challenge. Only two of the original



U.S. SUPPORT FOR THE PRT PROGRAM (MILLIONS)

PRT Funding Category	FY 2006 Supplemental Enacted	FY 2007 Supplemental Enacted	Total	FY 2008 BUDGET REQUESTED
Operational Funding	\$230°	\$414	\$644	\$679
Program Funding from ESF				
PRT/PRDC Projects	315	720	1,035	160
PRT Local Government Program	155	90	245	98 ^b
Total ESF	470	810	1,280	258°
Grand Total	\$700	\$1,224	\$1,924	\$937

Source: DoS, reported in SIGIR Audit 07-014, "Status of the Provincial Reconstruction Team Program Expansion in Iraq," July 2007.

Notes:

- None of the operating funds from FY 2006 were obligated or expended in FY 2006; they were carried forward into FY 2007.
- b Includes \$33 million base and \$65 million in Global War on Terror (GWOT) funding. (Source: USAID, response to SIGIR, July 18, 2007.)
- Includes \$93 million in base agency funding and \$165 million in GWOT funding.

TABLE 2.5

ten PRTs in operation have submitted work plans to OPA, making it difficult to determine what the PRTs aim to accomplish. SIGIR has recommended that the U.S. Ambassador to Iraq and MNF-I develop a performance monitoring system. ¹¹⁹ Section 3 of this Report provides additional information about SIGIR's audit of the PRT expansion program.

On the project execution level, security continues to hinder PRT efforts. At the provincial level, the ongoing violence makes it difficult to retain local staff and to visit project sites, according to USAID.¹²⁰

U.S. Support

As of June 2007, the United States has appropriated \$1.924 billion to support the PRT program; an additional \$937 million was requested for FY 2008. Approximately 67% of the \$1.924 billion are ESF funds.

Table 2.5 shows the U.S. support for the PRT program for FY 2006 to FY 2008.

ESF FY 2006 supplemental funds totaled \$470 million, of which USAID obligated \$155 million and, as of July 18, 2007, has not made any expenditure. GRD obligated \$110.16

million and expended \$6.95 million. As of July 12, 2007, the ESF FY 2007 Supplemental has yet to be released.¹²⁴ The status of ESF FY 2006 supplemental monies is shown in Figure 2.27.

CERP projects work to "pacify the local populations where PRTs reside." PRTs will continue to be a critical component to U.S.-funded efforts. Non-U.S. funding sources include the Development Fund for Iraq, Coalition partners, non-governmental organizations (NGOs), and donor nations. 126

ESF

PRTs help implement many U.S. efforts through CERP, IRRF, and ESF funds in partnership with the Provincial Reconstruction Development Committees (PRDCs). However, two programs—PRT/PRDC Projects and PRT Local Government Support—have allocated amounts specifically for PRT projects. Approximately 50%¹²⁷ of the ESF FY 2006 Supplemental allocated to the ESF security track went to GRD's PRT/PRDC Projects and USAID's PRT Local Government Support. Combined appropriated funds for these two programs increased from \$470 million in FY 2006 to

OBLIGATIONS FOR PRTS

\$ Billions, \$.265 Billion Total Sources: IRMS, ESF Cost to Complete (7/5/2007); USAID, Activities Report (7/12/2007)



Note: Numbers are affected by rounding. * FY 2006 Supplemental Funds (P.L.109-234).

\$810 million from the FY 2007 Supplemental, an increase of approximately 72%.128 Figure 2.28 shows the status of ESF-funded projects for these two programs.

PRT/PRDC Projects

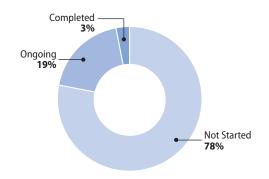
PRTs and PRDCs work at the local level to support reconstruction decision-making by provincial Iraqi officials. The shift to a more decentralized process means that the PRDC method for awarding projects has also evolved. USACE has implemented an interagency agreement that provides procedures for the submission of projects through Iraqi-led PRDCs and the approval of projects through the National Embassy Team (NET).

Under the process, PRDCs, PRTs, and the Provincial Council work together to nominate projects and obtain approval through NET.¹²⁹ For example, in Anbar, "procedural details to develop project lists have been worked between the Governor and Provincial Council Chairman. The Anbar PRT is actively engaged in this process by bringing the Governor and Provincial Council Chairman to Baghdad to report on their project list development status."130

As of June 28, 2007, the Iraqi PRDCs have submitted a list of 304 prioritized projects totaling approximately \$432 million to the ITAO office at the U.S. Embassy in Baghdad for consideration.¹³¹ As of July 2, 2007, NET has approved 198 projects, of which 100 projects have been awarded with a total value of more than \$130 million. 132 Approximately 41% of the available \$315 million has been awarded.

Figure 2.28 STATUS OF ESF* PROJECTS - PRTS TOTAL NUMBER OF PROJECTS: 237

Sources: IRMS, ESF Project Tracker (6/29/2007); USAID, Activities Report (7/12/2007)



Project Type	Not Started	Ongoing	Completed	Total
PRT/PRDC Projects	186	42	6	234
PRTs Local Government Support		3		3
Total	186	45	6	237



^{*} Funded by the ESF FY 2006 Supplemental.



Figure 2.29 shows the values of the projects that have been approved by PRDCs, the total cost approved by NET, and the total awarded since September 2006.

The following activities were reported for individual provinces through this quarter:

- 41 contracts totaling \$71.7 million have been awarded for PRDC projects in Baghdad; approximately 61% of the \$118 million was allocated to Baghdad. 133
- An additional \$12.2 million in funding has been requested by the Anbar PRDC.134
- Six provinces with combined ESF allocations of approximately \$84.7 million have not awarded a PRDC project.135

Figure 2.30 presents a distribution of NETapproved and awarded projects by governorate.

PRT Local Government Support

ESF's Local Governance Program (LGP)

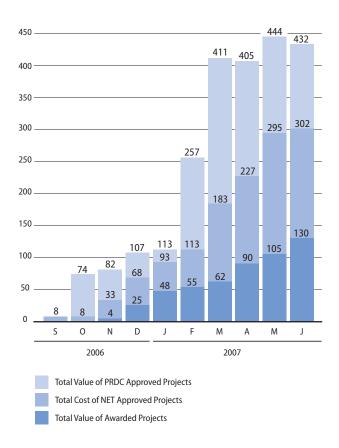
complements the efforts of PRTs by supporting provincial and local government policy reform, a decentralized mode of governance, government to citizen services, economic development, and transparency and accountability support. USAID obligated the entire \$155 million of FY 2006 ESF Supplemental under the existing LGP contract. In the six months before June 2007, LGP reported these outputs:136

- 2,779 people were trained to strengthen their local government skills and capacities.
- 16 Provincial Councils and 64 lower-level councils received performance improvement assistance.

Figure 2.29



Source: GRD, Response to SIGIR (7/21/2007)



560 people in government were trained to strengthen transparency.

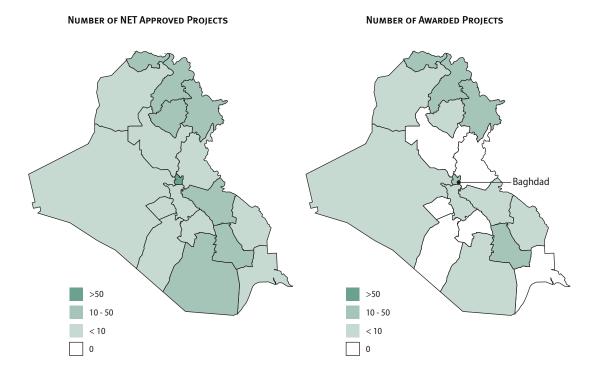
Additionally, through the PRTs, the funds will help build the capacity of local administrators to direct services in a number of areas. 137 One of the LGP efforts was the USAID's conference on "Strengthening Public Participation in Babil [Babylon] Local Government." Babylon Provincial Council members delivered presentations on the structure of local government and its authority within its framework to more than 250 attendees—representatives from NGOs, community action groups, university professors, and council members. 138

Figure 2.30

PRT/PRDC PROJECTS

Source: ITAO,* Weekly Status Report (7/3/2007)





Note: Erbil, Sulaymaniyah, and Dahuk are combined under KRG, which in total has 30 NET approved and 20 awarded projects. * By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to IRMO.

Iraqi Support

PRTs track Iraqi expenditures in the provinces and provide OPA with updates on the progress of Iraqi involvement in capacity development efforts at the provincial level.

The total funding available for provincial budgets in 2007 is approximately \$5.4 billion:139

- Iraq put \$2.4 billion toward provincial spending.140
- Ministry funds provide \$2 billion.¹⁴¹
- Remaining provincial funds from 2006 total \$1 billion.142

Based on monthly PRT data, most Iraqi provinces executed more than 50% of their 2006 budgets:143

- Seven provinces reported 100% of their 2006 budget contracted.
- Five provinces reported more than 90% of their 2006 budget contracted.

DoS reports that "though the FY 2006 Budget Law allocated funds 'to be expended until [December 31, 2006];' subsequently, GOI has allowed the provinces to continue to expend those FY 2006 monies in 2007."144

Several provinces continue to struggle with budget execution and tracking. Provincial budgets are a new idea; under Saddam, provinces had no spending authority.145 According to the U.S. Treasury, the provinces' limited capacity to understand and implement the contracting



IRAQ'S CAPITAL BUDGET OBLIGATIONS, BY GOVERNORATE

\$598 \$240 \$197	AMOUNT OBLIGATED \$598 \$240	% OBLIGATED 100%	BUDGET ALLOCATED \$559	AMOUNT OBLIGATED \$264	% Obligated 47%
\$240 \$205	\$240		\$559	\$264	170/
\$205		100%			47 70
		100 /0	\$226	\$36	16%
\$197	\$197	96%	\$195	\$90	46%
\$137	\$197	100%	\$138	\$119	86%
\$132	\$132	100%	\$112	\$112	100%
\$118	\$23	20%	\$109	\$0	0%
\$99	\$101	100%	\$93	\$33	35%
\$97	\$54	56%	\$107	\$0	0%
\$97	\$97	100%	\$90	\$25	28%
\$94	\$86	92%	\$88	\$32	36%
\$88	\$88	100%	\$64	\$29	46%
\$88	\$56	63%	\$83	\$32	38%
\$74	\$67	90%	\$71	\$58	81%
\$63	\$57	91%	\$127	\$3	2%
\$55	\$50	92%	\$52	\$16	30%
\$0	\$0	0%	\$0	\$0	0%
\$2,245					
	\$97 \$94 \$88 \$88 \$74 \$63 \$55	\$97 \$97 \$94 \$86 \$88 \$88 \$88 \$56 \$74 \$67 \$63 \$57 \$55 \$50	\$97 \$97 100% \$94 \$86 92% \$88 \$88 100% \$88 \$56 63% \$74 \$67 90% \$63 \$57 91% \$55 \$50 92%	\$97 \$97 100% \$90 \$94 \$86 92% \$88 \$88 \$88 100% \$64 \$88 \$56 63% \$83 \$74 \$67 90% \$71 \$63 \$57 91% \$127 \$55 \$50 92% \$52	\$97 \$97 100% \$90 \$25 \$94 \$86 92% \$88 \$32 \$88 \$88 100% \$64 \$29 \$88 \$56 63% \$83 \$32 \$74 \$67 90% \$71 \$58 \$63 \$57 91% \$127 \$3 \$55 \$50 92% \$52 \$16

Source: MNF-I, Provincial Budget Execution presentation, July 18, 2007. Note: Totals have been changed to more accurately reflect data.

TABLE 2.6

procedures is exacerbated by the short list of companies willing to take on a contract, given the security situation.¹⁴⁶

Diyala has executed only 20% of its 2006 budget. MNF-I reports that Diyala is experiencing several challenges that have limited its ability to spend its provincial budget. Diyala lacks qualified staff, and the province needs significant improvement on the security front. USAID's LGP works with the PRT in Diyala to develop an execution process that will more efficiently move plans for capital projects through Diyala's local government.

Anbar also has been experiencing budget difficulties because of a cash shortage. 150 Without the cash to pay its contractors, Anbar is limited in its ability to execute its budget. For this reason, only 56% of Anbar's 2006 budget has been expended, and none of its 2007 budget. 151

Table 2.6 shows the status of the capital budgets of Iraq's provinces in 2006 and year-to-date 2007. The bottom row shows total budgets, total obligated amounts, and the national average percentage of budgets executed in Iraq for each year.¹⁵²



CAPACITY DEVELOPMENT

Capacity development must be an essential part of the U.S. strategy to strengthen Iraq's public sector. Capacity development activities facilitate the transfer of knowledge, skills, and abilities across a range of GOI functions. 153

In October 2005, SIGIR reported on a growing recognition within the U.S. government that the GOI was not prepared to assume the near- or long-term management and funding of the infrastructure developed through U.S.-managed IRRF projects.

As a result, IRMO and USAID began planning to provide more capacity development support to Iraqi ministries and executive institutions.

U.S. support targets three key areas:

- improving budget preparation and execution
- improving the ability to support and sustain critical infrastructure projects
- improving the management capacity of the Iraqi ministries and civil service

The lack of an integrated capacity development strategy has inhibited U.S. efforts since the inception of the reconstruction program.

Budget Execution

Iraq's 2006 budget totaled \$34 billion; its 2007 budget is \$41 billion.154 But only 22% of the 2006 capital budget was spent last year.¹⁵⁵ By contrast, ministry execution rates of administrative budgets (salaries) were at 99%.156

The GOI failed to spend any of its January 2007 \$0.8 billion capital expenditures¹⁵⁷ because the 2007 budget was not approved until February 2007. Passage of the budget cleared the way for an increase in budget expenditure, and in February 2007, \$2.454 billion of the budget was spent.¹⁵⁸ No budget execution data has been reported for March 2007.159

The GOI continues to face many challenges in meeting its goal to fully execute the 2007 budget within the year. "Sustaining progress through September to meet this benchmark at year-end requires accelerated spending and procurement activity, which are challenging tasks in the face of capacity constraints and security problems."160

The unpredictable nature of Iraq's revenue adds to these concerns. Iraq's 2007 budget depends largely on revenue that fluctuates with the price of oil. It is difficult to predict the



GOI's 2007 income without a clear idea of the cost per barrel. 161

PROCUREMENT PROCESS

The complicated procurement process is one cause of capital budget execution delays. GAO reported that "the lack of agreed-upon procurement and budgeting rules causes confusion among ministry officials and creates opportunities for corruption and mismanagement." ¹⁶²

The Iraqi procurement process is complex:¹⁶³

- Contracts for more than \$5 million are reviewed/approved by High Contracts Committee.
- 2. The spending ministry awards the contract to its chosen vendor.
- 3. The spending ministry applies for a letter of credit (L/C).
- 4. The application is submitted through the Ministry of Finance.
- 5. The Ministry of Finance passes the application to the Trade Bank of Iraq (TBI).
- The Ministry of Finance authorizes the Central Bank of Iraq to release funds equal to 100% of the total value of the L/C to J.P. Morgan (JPM).
- 7. TBI sends the L/C application electronically to JPM.
- 8. JPM sends the L/C application to a Consortium Bank.
- 9. The Consortium Bank issues the L/C to Vendor Bank.

ADDRESSING THE CHALLENGES TO BUDGET EXECUTION

The GOI has formed a Budget Execution Monitoring Unit (BEMU), run by the Deputy Prime Minister, in an effort to address budget execution challenges. The unit is tasked with improving Iraqi budget processes. Treasury reports that the BEMU will ultimately take over Treasury's role in reporting on Iraqi budgets. ¹⁶⁴

In February, the Ministry of Finance issued the early release of 10% of each budget in an effort to increase efficient budget execution. In addition, as reported last quarter by SIGIR, the GOI has instituted a new budgetary policy: any ministry that fails to obligate 25% or more of its budget by the end of June 2007 will risk losing some of that budget. The Ministry of Finance is authorized to reallocate these unused ministry funds. In the same of the same o

The Ministry of Planning, in association with the Joint Contracting Command-Iraq/ Afghanistan (JCC-I/A), has formed a Procurement Assistance Center (PAC) to train ministry procurement officers in writing spending requests. ¹⁶⁷ The PAC defines its mission as follows: "Assist the Government of Iraq to execute its capital budget by developing professional people, end-to-end processes, and enabling technology." ¹⁶⁸ Some of the PAC's short-term objectives include: ¹⁶⁹

- create standard forms for budget process
- conduct initial training for ministries and provinces
- create a PAC website and help desk



The U.S. government has been working closely with the GOI to address budget execution challenges. In April 2007, DoS authorized DoD to offer commodities and services to the GOI to ease budget execution problems, according to GAO. This aid would be provided on an "advance-of-funds basis," which would require the GOI to issue an official request for the U.S. government's services.¹⁷⁰

These organizations are working in coordination with the GOI to improve the national budget process:171

- DoD Task Force To Improve Business and Stability Operations (TF-BSO)
- JCC-I/A
- Treasury
- DoS

TF-BSO has two teams working with the Ministry of Planning on budget execution. One of these teams operates from Baghdad, and the other works with the Kurdistan Regional Government (KRG) from a satellite office.172

The Ministry of Defense and the Ministry of Interior have also been seeking experts to help them execute their 2007 budgets through U.S. Foreign Military Sales (FMS).¹⁷³ The Defense Security Cooperation Agency defines FMS as "the government-to-government method for selling U.S. defense equipment, services, and training."174

The GOI has provided \$1.7 billion for FMS services, including aid for budget execution.¹⁷⁵ The DoS FY 2008 budget anticipates that Iraq will spend an estimated \$1 billion in FMS services per year for 2007 and 2008.176

Despite difficulties in budget execution in 2006, the GOI's security budget for 2007 will increase from \$5.4 billion to \$7.3 billion. DoD reports that this budget increase is evidence of the GOI's independence and increased focus on security. However, GAO's report on Iraq's security budget and management raises questions about the ability of the GOI to effectively execute this larger budget. GAO warns: "As the U.S. government transfers more of its security responsibilities to the Iraqi government, it is important that the Iraqi government demonstrate that it can execute its approved budget more effectively."177

U.S. Support

In addition to supporting improved budget execution, U.S. activities in this sector focus on building other capacities across the GOI. Efforts in this area range from O&M training at the individual project level up to the ministries. Specialized U.S. agencies¹⁷⁸ provide targeted support directly to the Iraqis and in collaboration with other international donors. For more information on international donor efforts, see International Support for Iraq Reconstruction later in this section.

FUNDING STATUS

Capacity development has been allocated \$165 million in total ESF FY 2006 funding, which is more than 11% of overall ESF funds. 179 These U.S. agencies received funding for capacitydevelopment programs:



- \$60 million went to USAID for Ministerial Capacity Development.
- \$45 million went to IRMO (now ITAO) for Ministerial Capacity Development.
- \$60 million went to GRD for Plant-Level Capacity Development and Technical Training.¹⁸⁰

Of the \$124.12 million that has been obligated to date, approximately 17.3% (\$21.43 million) has been expended.¹⁸¹ For the status of funds in the capacity development sector, see Figure 2.31.

ESF is funding 59 projects across 2 areas—Ministerial Capacity Development (USAID and ITAO) and Capacity Development and Technical Training (GRD). In Ministerial Capacity Development, there is one ongoing project. In Capacity Development and Technical Training, almost 75% of projects have not started and 25% are ongoing. Figure 2.32 shows the status of ESF projects in the capacity development sector.

Short-term Initiatives

ITAO is tasked with short-term initiatives, which use teams to strengthen policy functions across the GOI. It supports training in procurement and contracting, budget assistance, English language, and the Financial Management Information System (FMIS). The office also provides support to bilingual and bicultural advisors, as well as the development of the Ministry of Electricity's master plan. ¹⁸³

Medium-term and Long-term Initiatives

USAID's \$165 million National Capacity Development (NCD) Program is working to strengthen the GOI's policy functions and personnel.¹⁸⁴ Approximately \$65 million of NCD has been obligated since the program began in August 2006.¹⁸⁵

The NCD, also known as Tatweer, operates in the Ministries of Oil, Electricity, Finance, Water, Health, Education, Justice, Planning and Development Cooperation, Agriculture, and Public Works. In addition, the program works with the Prime Minister's Office and the Council of Ministers' Secretariat.¹⁸⁶

Tatweer offers ministerial support and provides guidance to foster sustainable policy mechanisms, regulations, and personnel development.¹⁸⁷ Public Management Advisors (PMAs) work in the ministries to assist with "development planning and implementation."¹⁸⁸ Currently, PMAs are staffed in seven of

Figure 2.31

OBLIGATIONS TO CAPACITY DEVELOPMENT

\$ Billions, \$.124 Billion Total Sources: ITAO, ^a Weekly Status Report (6/26/2007); IRMS, ESF Cost to Complete (7/5/2007); USAID, Activities Report (7/12/2007); ITAO, Response to SIGIR, (7/14/2007)

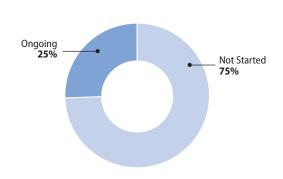


Note: Numbers are affected by rounding. a. By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO. b. FY 2006 Supplemental Funds (PL. 109-234).



Figure 2.32 STATUS OF ESF* PROJECTS - CAPACITY DEVELOPMENT TOTAL NUMBER OF PROJECTS: 59

Sources: IRMS, ESF Cost to Complete (7/5/2007); IRMS, ESF Project Tracker (6/29/2007); USAID, Activities Report (7/12/2007)



Project Type	Not Started	Ongoing	Completed	Total
Capacity Development and Technical Training	44	14		58
Ministerial Capacity Development		1		1
Total	44	15		59

the ten targeted ministries, except for the Ministries of Finance, Justice, and Education. 189

Tatweer has also established a scholarship program that enables Iraqi civil servants to earn advanced degrees in public administration; renovated Iraq's National Center for Consultation and Management Development building; set up regional offices in Erbil and Mosul; and developed training programs in procurement, information technology, financial management, policy development, and administration.190

In May 2007, Tatweer awarded 75 scholarships for Iraqi public servants. The students (36% female) come from 11 provinces and "represent 14 central government institutions, plus the Kurdish Regional Government..."191 In July 2007, USAID reported that 80 scholarships had been awarded.192

Metrics

Metrics for the NCD program were reviewed in July. Measuring outcomes, however, is difficult because of the nature of the program and the time required for tangible results. 193

The initial target of training 1,500 civil servants has been revised194 to reflect time constraints and the difficulty "finding Iraqi training institutions able and willing to roll out the newly designed courses."195 Proposals from Iraqi institutions are expected by the end of July.

The overall goals of NCD remain the same: improving administrative systems, strengthening institutions, and providing training. 196 From November 2006 to July 3, 2007, Tatweer conducted 53 classes, ranging from the Fundamentals of Project Management, Cash Management, Government Procurement, Human Resources, Leadership, Test of English as a Foreign Language (TOEFL) Competency

^{*} Funded by the ESF FY 2006 Supplemental.

CAPACITY DEVELOPMENT



to Anticorruption.¹⁹⁷ More than 800 people have participated in the training sessions. 198 Most participants come from the Ministries of Planning and Agriculture; the most-attended classes are on procurement, budgeting, project management, leadership, and anticorruption.¹⁹⁹

Sector-focused Initiatives

In the electrical, transportation and communications, health care, and water and sanitation sectors, GRD administers \$60 million in FY 2006 ESF Economic track funds for capacity development. Of that amount, GRD reported \$22 million in contractual obligations—nearly 37% of the total programmed amount. Approximately \$5.8 million has been expended.²⁰⁰ See Table 2.7 for sector funding data.²⁰¹

These are examples of GRD capacitybuilding activities that were not funded by ESF this quarter:202

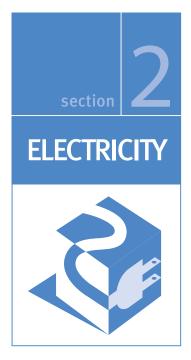
- conducting two basic training classes on contracting, with the support of JCC-I/A, "to assist potential Iraqi contractors with understanding the procedures associated with responding to tenders"
- signing a Grant Agreement for Nassriya Drainage Pump Station with the Minister of Water Resources, which allows GRD "to provide procurement, administration, construction, management, and quality assurance for agreed-upon construction projects"
- organizing the Business Networking Day, with co-sponsors, "to provide vetted Iraqi firms quality networking time with U.S. firms...so that they can establish a working relationship"

ESF SECTOR FUNDING DATA (MILLIONS)

Sector	Programmed Amount	Total Obligated	Unobligated
Electricity	\$25	\$16	\$9
Health	12	0	12
Transportation and Communications	8	2.5	5.5
Water	15	3.5	11.5
Total	\$60	\$22	\$38

Source: Program Review Board, Capacity Development and Sustainment Program Status-ESF06, June 29, 2007, p. 52.

TABLE 2.7



ELECTRICITY

Since 2003, the electricity sector has received the second-largest investment of Iraq reconstruction funds, amounting to more than \$4.6 billion. Despite this major investment, which funded the repair and rehabilitation of generation facilities, transmission lines, and distribution networks, the Iraqi electric grid remains fragile and vulnerable. Thus, the power generated does not meet demand.203

This quarter, electricity output declined for the month of May, but rebounded in mid-June.²⁰⁴ Actual peak generation²⁰⁵ this quarter averaged approximately 4,230 megawatts (MW) of power per day, which is above the previous quarter's output but 1,750 MW below the reconstruction goal of 6,000 MW generated per day. Actual peak demand this quarter was 8,120 MW per day.206 Table 2.8 and Table 2.9 compare production and output this quarter with the same period last year and prewar production levels.

Baghdad

This quarter, Baghdad received an average of 8.1 hours of power²⁰⁷ per day, almost 4 hours less than the rest of the country but higher

CURRENT ACTUAL PEAK PRODUCTION VS. PAST PRODUCTION LEVELS (MEGAWATTS)

OUTPUT METRIC	DAILY AVERAGE, LAST WEEK OF JUNE 2007
Actual Peak Power Generated (MW)	4,230
% Change, Previous Quarter (3,872 MW)	9%
% Change, June 2006 (4,201 MW)	1%
% Change, Pre-war Level (4,500 MW)	-6%

Sources: Pre-War level: DoS briefing by U.S. Embassy-Baghdad, November 30, 2005; Goals: Joint U.S.-Iraqi Electricity Action Plan; Current: ITAO, Electric Daily Units Performance Report, last week of June 2007 (6/24-6/30/2007); last week of March 2007 (3/20-3/26/2007); last week of June 2006 (6/24-6/30/2006); last week of March 2006 (3/25-3/31/2006)

TABLE 2.8

CURRENT TOTAL AVAILABLE PRODUCTION VS. PAST PRODUCTION LEVELS (MEGAWATTS)

OUTPUT METRIC	DAILY AVERAGE, LAST WEEK OF JUNE 2007
Total Available Capacity (MW)	4,558
% Change, Previous Quarter (4,068 MW)	12%
% Change, June 2006 (4,517 MW)	1%
% Change, Pre-War Level (n/a)	n/a

Sources: IRMO/ITAO, Weekly Status Report (12/14/2005 - 6/26/2007) Pre-War level: DoS Briefing by U.S. Embassy-Baghdad, November 30, 2005; Goals: Joint U.S.-Iraqi Electricity Action Plan; Current: ITAO, Electric Daily Units Performance Report: last week of June 2007 (6/24-6/30/2007), last week of March 2007 (3/20-3/26/2007), last week of June 2006 (6/24-6/30/2006), last week of March 2006 (3/25-3/31/2006)

Note: Total Available Capacity = Actual Peak Capacity (MW) + Iraq Import (MW).

TABLE 2.9



Hours of Power Baghdad

OUTPUT METRIC	DAILY AVERAGE, LAST WEEK OF JUNE 2007
Baghdad Hours of Power/Day	8.1
% Change, Previous Quarter (6.5 Hours)	25%
% Change, June 2006 (8.1 Hours)	0%
% Change, Pre-war Level (16-24 Hours)	-66%

Source: ITAO, Electric Daily Units Performance Report, last week of June 2007 (6/24-30/2007), last week of March 2007 (3/20-3/26/2007), last week of June 2006 (6/24-6/30/2006)

TABLE 2.10

than last quarter. Baghdad averaged the same amount of hours of power in the same period last year.

Available power in Baghdad continues to lag behind pre-war levels for these reasons:

- The U.S. reconstruction strategy in this sector focused on providing power more equitably throughout the country.
- Power lines that feed the capital continue to be attacked.
- Transferring power to the capital from large plants in northern and southern Iraq has been compromised by local political manipulation of the power grids.

Table 2.10 compares the hours of power for Baghdad with the measure for the first quarter of this year, the quarter ending in June 2006, and pre-war levels.

Baghdad has never had enough power plants to meet its own demand, and thus it must import power from other regions. Building new plants is part of the GOI's longterm power-generation plan.

ITAO reports that improper "fuel supplies continue to be a major setback for increasing the amount of electricity in the country and the Baghdad Ring."208 As SIGIR has noted in previous reports, 16 of the 35 gas turbines installed by the United States are currently using less than optimum fuel—such as diesel, crude, or heavy fuel—instead of the natural gas for which they were designed. This practice greatly increases maintenance requirements and decreases overall capacity.



Transmission lines continue to be the target of saboteurs.²⁰⁹ As of June 30, 2007, eight of the twelve 400-kV lines were out of service.210 Three transmission lines feed power to Baghdad from the north, and two of these lines were out of service during the past quarter.²¹¹ In the south, three of the four transmission lines that feed Baghdad were out of service during this quarter.

Iraq's power system "remains very fragile and experiences frequency drops that result in breakers tripping and blackouts."212 The Ministry of Electricity's National Dispatch Center is supposed to manage electricity usage for the provinces based on demand. But this quarter, blackouts were caused by the "refusal of the provinces to follow the allocations from the Ministry of Electricity."213

One key to providing more power to the Baghdad ring is "get[ting] control of distribution circuit breakers and the substations in the outer provinces."214 In May, Baghdad consumed an average of 15% of Iraq's total electricity generation—12% below its allocation from the National Dispatch Center.²¹⁵ The GOI must continue to develop control over the substations that operate and maintain the local grids because these stations are essential to supplying more power to Baghdad.

Outside Baghdad

Outside Baghdad, hours generated of electrical power for the last week in June 2007 (nearly 12 hours per day) was greater than before the U.S.-led invasion but 13% below the measure of hours of power for the same period last year. See Table 2.11 for the measure of hours of power compared to pre-war levels.

Hours of Power outside Baghdad

OUTPUT METRIC	DAILY AVERAGE, LAST WEEK OF JUNE 2007
Iraq Hours of Power/Day	11.85
% Change, Previous Quarter (14 hours)	-15%
% Change, June 2006 (13.6 hours)	-13%
% Change, Pre-war Level (4-8 hours)	48%

Sources: Pre-war level: DoS Briefing by U.S. Embassy-Baghdad, November 30, 2005; Current: ITAO, Electric Daily Units Performance Report: last week of June 2007 (6/24-6/30/2007), last week of March 2007 (3/20-3/26/2007), last week of June 2006 (6/24-6/30/2006)

TABLE 2.11

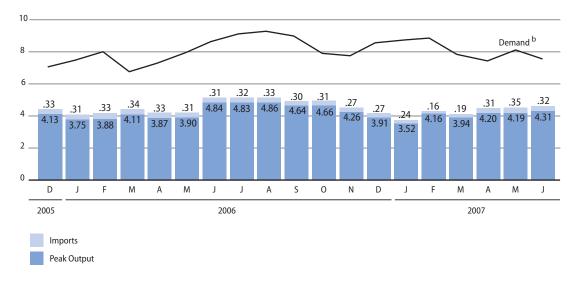


Figure 2.33

ELECTRICITY DEMAND VS. CAPACITY

Monthly Average Gigawatts (GW = 1,000 MW)

Source: IRMO, Weekly Status Reports (12/14/2005 - 5/8/2007); ITAO, Weekly Status Reports (5/8/2007 - 6/26/2007)



- a. By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.
- b. The demand for electrical output is not constant; from 12/2005 3/2007, the seasonal demand ranged from 6.39 to 9.61 GW per week.

Figure 2.33 indicates that demand for electricity—8,120 MW on average this quarter— continues to significantly surpass Iraq's average peak generation capacity. Iraq imported slightly more than 300 MW per day this quarter, bringing total available capacity to 4,550 MW per day.

Blackouts happen frequently across Iraq because of local breakdowns at key power-transfer points. Insurgents are also targeting the smaller, more local 132-kV lines that direct power across the provinces. These lines are often controlled by local substations.

This quarter, Anbar province generated more power than the governorate demands

because of the increased production at a provincial hydroelectric plant. However, Anbar has been reluctant to share excess power with the national grid.²¹⁶

U.S. Support for Electricity

The United States has allocated approximately \$4.61 billion to the electricity sector in Iraq through three major funds. See Figure 2.34. U.S. electricity projects have contributed 2,700 MW to Iraq's generation capacity.²¹⁷

To boost capabilities, the U.S. reconstruction program funded three major types of projects in the electricity sector:

• Generation facilities produce power for the



system.

- Transmission networks carry that power across the country.
- Distribution networks deliver the transmitted power to local areas, homes, and businesses.

As of June 27, 2007, nearly 82% of electricity sector IRRF obligations had been expended.²¹⁸ See Figure 2.35 for the status of all U.S. funds obligated in the electricity sector.

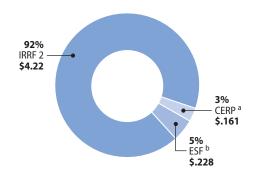
IRRF

Figure 2.34

ALLOCATIONS TO ELECTRICITY

\$ Billions, % of \$4.61 Billion

Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); IRMS, ESF Economic Track Summary (7/5/2007)



Note: Numbers are affected by rounding. a. Allocation detail at the sector and subsector level for CERP is currently unavailable; therefore, the percentages for CERP are calculated using FY 2006 and FY 2007 dollars obligated. b. FY 2006 Supplemental Funds (P.L.109-234).

Reprogrammings of the IRRF reduced electricity sector funding by \$1 billion, leaving 23% of the IRRF 2 allocated to electricity.

The IRRF 1 reconstruction goal for the electricity sector was to increase peak generation output to 6,750 MW from a pre-war level of 4,500 MW,²¹⁹ but the goal was subsequently reduced to 6,000 MW. For projects funded by IRRF 2, see Figure 2.36.

Major IRRF-funded projects in the generation, transmission, and distribution areas include:

Doura Power Station (320-MW capac-

Figure 2.35

OBLIGATIONS FOR ELECTRICITY

\$ Billions, \$4.33 Billion Total

Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); IRMS, ESF Cost to Complete (7/5/2007)



a. FY 2006 and FY 2007. b. FY 2006 Supplemental Funds (P.L. 109-234).



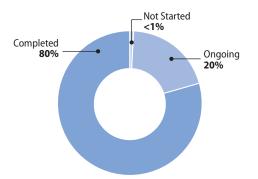
ity). SIGIR conducted an inspection of the Doura project this quarter. SIGIR inspectors found that in August 2006, equipment was removed from Unit 6 as it neared operational status and placed into Unit 5 to expedite its restart after catastrophic failure. Ministry of Electricity officials decided to swap the exciter from Unit 6 to Unit 5 to minimize outage time and to quickly restore electric power to the Baghdad grid as a short-term solution. However, Unit 5 failed, and Unit 6 was rendered inoperable because of the switch. Therefore, 320 MW of electricity was unavailable to the Baghdad grid. For details on this inspection, see section 3.

Qudas Expansion Project (180-MW capacity). The Qudas Power Plant has eight gas turbine generators, four of which are offline because of maintenance and fuel shortages. The project end-date is scheduled for January 2008, which is later than

- planned because orders of equipment were placed late.220
- Khor al-Zubair Generation Plant (250-MW capacity). The United States funded generation work at this power plant. A SIGIR inspection reported that the plant was functioning properly as of April 2006. The plant's six gas turbine generators remain operational.
- Baiji Power Plant (320-MW capacity). The United States funded repairs to mobile engines and inspections of three gas turbine generators. Three of Baiji's four gas turbine generators are working, but all eight small mobile generators are offline.
- Substations. The United States funded repairs to the Baghdad West substation and extensions in the north and south. SIGIR inspections have reported positive outcomes on work at five substations in Basrah.

Figure 2.36 STATUS OF IRRF 2 PROJECTS - ELECTRICITY TOTAL NUMBER OF PROJECTS: 529

Sources: IRMS, ITAO* Rollup (6/29/2007); USAID, Activities Report (7/12/2007)



Project Type	Not Started	Ongoing	Completed	Total
Distribution	1	75	342	418
Transmission	1	24	33	58
Generation		1	47	48
Automatic Monitoring and Control System		4	1	5
Total	2	104	423	529

Note: Numbers are affected by rounding.
* By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.



The IRRF funded the Supervisory Control and Data Acquisition network (SCADA), which was expected to help maximize the availability of electricity across Iraq by automating the distribution of power across Iraq. However, GRD reported to SIGIR this quarter that the SCADA projects were terminated because of budget overruns.

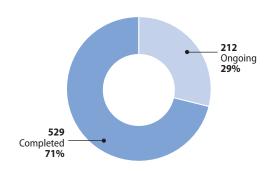
According to GRD, "there is no firm commitment to complete this work with IRRF funds; however, ITAO may continue to complete the system using alternative means."221 In April, DoS reported that the Ministry of Electricity will be provided with "drawings, equipment and material, a detailed list of what equipment has been installed and tested and a list of equipment and testing that remains to be completed."222

CERP

CERP FY 2006 and FY 2007 funds represent 3% of the total U.S. funds allocated for electricity reconstruction in Iraq and 17% of the total CERP funds allocated for reconstruction in Iraq. MNC-I has undertaken 741 electricity projects with CERP FY 2006 and FY 2007 funds. CERP-funded projects support local efforts to repair electrical distribution and transmission systems to ensure that power reaches Iraqi homes. Figure 2.37 shows the status of sector projects funded by the CERP.

According to GRD, 21 CERP electricity projects, totaling \$33.8 million, have been programmed in Baghdad.²²³ In Babylon, nearly \$700,000 of the CERP is being used to repair the Mussayib Electrical Network. This project has the potential to provide an electrical network to 5,000 homes.²²⁴ In Ramadi, CERP is

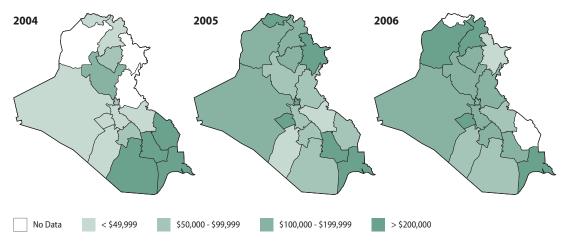
Figure 2.37 STATUS OF CERP FY 2006 AND FY 2007 PROJECTS - ELECTRICITY TOTAL NUMBER OF PROJECTS: 741 Source: MNC-I, Response to SIGIR (7/7/2007)





AVERAGE VALUE PER CERP ELECTRICITY PROJECT BY GOVERNORATE

Source: IRMS, CERP Excel Workbook (6/29/2007)



Note:

Data is compiled using FY 2004, FY 2005, and FY 2006 CERP funds. Years indicated correspond to the actual start dates of the projects.

funding a \$3 million project that will install a 132-kV circuit at the regional substation.²²⁵

As IRRF funding in this sector has been expended, CERP funds have taken on an increasingly significant role. Since 2004, the average value of CERP electricity projects in Iraq rose from \$94,000 in 2004 to \$194,000 in 2006.226 In 12 provinces, CERP FY 2006 electricity projects averaged more than \$100,000 in value, including Basrah and Kerbala, where the average CERP electricity project was valued at more than \$500,000.

This quarter, SIGIR announced that it is undertaking an audit of CERP projects in Iraq valued at more than \$400,000. Figure 2.38 shows the average value of electricity projects from 2004 to 2006.

ESF

Electricity projects received approximately \$228 million of ESF FY 2006 supplemental funds through the O&M Sustainment program.²²⁷ Approximately 80%²²⁸ of the total amount programmed for ESF's O&M Sustainment program was allocated to electricity projects.²²⁹

USACE GRD is the implementing agency for this program. GRD has completed 43 statements of work, initiated procurement actions for 39 of 62 O&M sustainment projects, and awarded contracts for 6 sustainment efforts, totaling \$83.6 million.²³⁰ Figure 2.39 shows the status of the ESF O&M Sustainment projects for electricity.

O&M is particularly important for the Ministry of Electricity. DoS reports that "the longterm success of reconstruction relies heavily on the ability of the [Ministry] to execute an effective O&M program."231 SIGIR's inspection of the Doura Power Plant showed that sustainable operations of generators cannot be reasonably assured "unless the Ministry of





The Iraqi power grid remains very fragile and susceptible to attacks and breakdown.

Electricity's O&M practices improve." SIGIR inspectors also noted that "too often, the ministry has operated improperly or insufficiently maintained equipment in environments where equipment failure was likely."

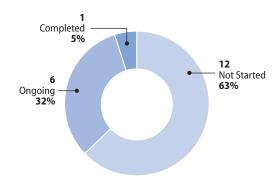
Since last quarter, the Ministry of Electricity has completed one of two planned O&M contracts for support training. A contractor has been mobilized to support education in

engineering and machine-specific training. The second contract, which has not yet been completed, has been hindered by problems obtaining visas and passports for trainees.²³²

The ESF Capacity Development and Technical Training program also provides an additional \$25 million for electricity projects.

Figure 2.39

STATUS OF ESF* PROJECTS - ELECTRICITY **TOTAL NUMBER OF PROJECTS: 19** Source: IRMS, ESF Project Tracker (6/29/2007)



^{*} Funded by the ESF FY 2006 Supplemental.

ELECTRICITY





OIL AND GAS

Oil production in Iraq has been on the rise since January 2007.233 Notwithstanding this recent rise, long-term output remains "constrained by security problems and persistent underinvestment."234

Iraq relies on the export of crude oil to generate the funds necessary "to achieve the politically vital goal of ensuring the stable provision and expansion of basic services."235 Oil export revenues account for over 70% of Iraq's gross domestic product and more than 90% of government revenues.²³⁶ Figure 2.40 shows the oil and gas infrastructure across Iraq, including the 4,350-mile pipeline system.

Oil production this quarter averaged 2.09 Million Barrels per Day (MBPD), a decrease of 6% compared to this same period last year, but an increase from the last quarter (1.9 MBPD). Oil production in Iraq has trended

upward since a fall off in January. Oil export output (1.57 MBPD) fell 6% below export levels for this same period last year but are up for 2007.237 Table 2.12 presents an overview of production output.

Quarterly export levels are affected by the operational status of the northern export pipeline (ITP) that links the Kirkuk oil fields to the Ceyhan terminal in Turkey. This line is regularly attacked by insurgents.

Over the last two quarters, because of attacks, the ITP has not been able to contribute in any meaningful way to the country's total exports. In May, the ITP pumped only approximately 200,000 barrels of crude oil before acts of sabotage by insurgents²³⁸ knocked the pipeline out of service.²³⁹ Only 2% of oil exports went through Ceyhan last quarter, contributing to an output that was below the Iraqi export target of 1.65 bpd.²⁴⁰ When the northern export lines are not operating, Iraq depends

OIL AND GAS



Figure 2.40

OIL AND GAS INFRASTRUCTURE BY GOVERNORATE

Source: CIA Country Profile Map





CURRENT OIL AND GAS PRODUCTION VS. PRE-WAR LEVEL AND GOAL

	Outcomes
Current Oil Production—Capacity*	3.00 MBPD
% change, same period last year** (2.50 MBPD)	20%
% change, Pre-war Level (2.80 MBPD)	7%
Goal (2.80 MBPD)	107%
Current Oil Production—Actual	2.09 MBPD
% change, same period last year (2.23 MBPD)	-6%
Pre-war level (2.58 MBPD)	-23%
Goal (2.64 MBPD)	79%
Export Levels	1.57 MBPD
% change, same period last year (1.67 MBPD)	-6%
Goal (1.65 MBPD)	95%
Natural Gas Production Capacity (MSCFD)	800 MSCFD
% change, same period last year (675 MSCFD)	19%
70 change, same period last year (075 Miscr D)	1370
Goal (800 MSCFD)	100%
Goal (800 MSCFD)	100%

Source: Oil Production Capacity, Natural Gas Production Capacity, and Liquefied Petroleum Gas Production Capacity figures come from USACE, response to SIGIR, June 9, 2007. Oil Production Actual, Oil Production Actual Goal, and Export Levels are taken from ITAO, Oil monthly import production and export spreadsheet, July 11, 2007.

*Oil Production Capacity, Natural Gas Production Capacity and Liquified Petroleum Gas Production Capacity are not measured in quarterly average but total capacity available.

**Same period last year comparison refers to quarterly output as reported by SIGIR in July 2006.

TABLE 2.12



heavily—almost exclusively—on the Al Basrah Oil Terminal (ABOT), the southern export node. Figure 2.41 shows the status of crude oil production by northern and southern region.

GOI Fuel Subsidies

In accordance with the IMF Stand-By Arrangement (SBA), Iraq's Ministry of Oil raised the prices this quarter of gasoline, blended gasoline, and diesel.²⁴¹ Iraq has been phasing in a significant increase in domestic fuel prices, which reduces the government subsidies for many fuel products.²⁴² Table 2.13 compares IMF goals for refined fuel increases with actual price increases.

Pursuant to the SBA, Iraq's 2007 budget allocates significantly less money (\$300 million) to the subsidy of fuel imports than it did in 2006; however, the Ministry of Oil continues to subsidize gas, diesel, and other domestically produced refined products



Iraqi Oil Refinery. Iraq lacks the domestic capacity to meet demand for refined fuels.

because Iraq lacks the domestic capacity to meet demand for refined fuels.²⁴³ Consequently, although it is one of the largest producers of crude oil in the world, Iraq must still import kerosene, gasoline, diesel, and liquefied petroleum gas (LPG).

Figure 2.42 shows the status of Iraq's refined fuel production this quarter compared to performance over the last three years.

PRICE INCREASES FOR REFINED FUELS (\$ PER GALLON)

	SEP. 2005	PRIOR 005 ACTION	3/31/2006		6/30/2006		9/30/2006		12/31/2006		6/30/2007	
			GOAL	Actual	GOAL	ACTUAL	GOAL	ACTUAL	GOAL	ACTUAL	GOAL	Actual
Regular Gasoline	\$0.05	\$0.26	\$0.33	\$0.26	\$0.40	\$0.45	\$0.45	\$0.45	\$0.54	\$0.68	\$0.91	\$1.06
Premium Gasoline	\$0.13	\$0.64	\$0.77	\$0.64	\$0.90	\$0.90	\$1.03	\$0.90	\$1.23	\$0.95	_	_
Blended Gasoline	_	_	_	_	_	_	_	_	_	\$0.95	\$1.21	\$1.36
Kerosene	\$0.01	\$0.06	\$0.13	\$0.06	\$0.19	\$0.19	\$0.23	\$0.19	\$0.31	\$0.20	\$0.45	\$0.61
Diesel	\$0.03	\$0.23	\$0.28	\$0.23	\$0.32	\$0.32	\$0.40	\$0.38	\$0.48	\$0.41	\$1.06	\$1.06

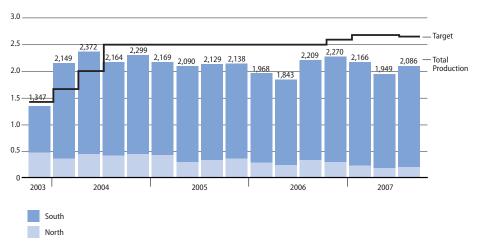
Sources: IMF, Country Report No. 07/115, March 2007; Conversion rates: IMF, response to SIGIR, July 19, 2007.

Note: Prices have been converted from Iraqi dinars per liter to U.S. dollars per gallon. These are the conversion rates used, by date: December 2005—1,474 ID/\$, March 2006—1,476 ID/\$, June 2006—1,477 ID/\$, September 2006—1,475 ID/\$, December 2006—1,391 ID/\$, June 2007—1,250 ID/\$.

TABLE 2.13

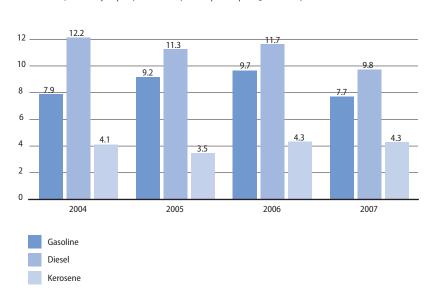


Figure 2.41 **CRUDE OIL PRODUCTION BY REGION** Millions of Barrels per Day, Quarterly Average Source: ITAO,* Monthly Import, Production, and Export (June 2007)



 $^{^{*}}$ By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.

Figure 2.42 **SUMMER FUEL REFINERY PRODUCTION 2004 - 2007** Millions of Liters Source: ITAO,* Monthly Import, Production, and Export Report (June 2007)





Hydrocarbon Legislation

The *Initial Benchmark Assessment* noted that "the Government of Iraq has not met its self-imposed goal of May 31, 2007, for submitting the framework hydrocarbon and revenue sharing laws to the [Council of Representatives]." GAO reported this quarter that "until this legislation is enacted and implemented, it will be difficult for Iraq to attract the billions of dollars in foreign investment it needs to modernize the sector."²⁴⁴

Since September 2006, the GOI and U.S. government sources have been reporting on the impending finalization of the hydrocarbon legislation. Despite previous reports of imminent passage in September 2006, December 2006, February 2007, and June 2007, the legislation has yet to be fully addressed by Iraq's Council of Representatives (COR).

DoS recently expressed confidence that the hydrocarbon legislation was "weeks rather than multiple months" 245 away from passage.

The hydrocarbon legislation is a series of four separate laws, establishing:²⁴⁶

- · a framework for lines of authority
- revenue sharing
- a national oil company
- a regulatory role for the Ministry of Oil

Without this legislation, development in the oil sector will remain stalled.

This quarter, Iraqi oil workers went on strike over unmet demands, including representa-

tion in the hydrocarbon law's drafting process. ²⁴⁷ The main impact of the strike was the shutdown of two oil product pipelines feeding Baghdad. ²⁴⁸

Report on Corruption

SIGIR previously reported on the detrimental effects of oil smuggling on Iraq's vital source of revenue. In a recent report, GAO confirms that "about 10% to 30% of refined fuels is diverted to the black market or smuggled out of Iraq and sold for profit." GAO also reported that "as much as 70% of the fuel processed at Baiji was lost to the black market, possibly as much as \$2 billion a year." 250

U.S. Support

IRRF and CERP projects in Iraq have supported the continued development of oil production facilities and export infrastructure. For the distribution of funding in this sector, see Figure 2.43. Figure 2.44 shows the status of U.S. funds in the sector.

This quarter, GRD reports that projects met their program goals.²⁵¹ These goals included:

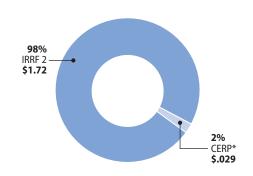
- increasing Iraqi oil production capacity to 3 million barrels per day (MBPD)
- increasing liquefied petroleum gas (LPG) capacity to 3,000 metric tons per day
- increasing natural gas production capacity to 800 standard cubic feet (SCF)



Figure 2.43

ALLOCATIONS TO OIL AND GAS

\$ Billions, % of \$1.75 Billion Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007)



Note: Numbers are affected by rounding. *Allocation detail at the sector and subsector level for CERP is currently unavailable; therefore, the percentages for CERP are calculated using FY 2006 and FY 2007 dollars obligated.

IRRF 2 \$1.57 CERP \$.029 * \$.006 Expended Not Expended

Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to

OBLIGATIONS FOR OIL AND GAS

\$ Billions, \$1.60 Billion Total

SIGIR (7/7/2007)

Sector progress continues to face several familiar challenges. The impact of slow budget execution and poor O&M inhibit growth. Iraqi Ministry of Oil officials face significant challenges in developing an effective contracting and procurement process. The contracting rules are reportedly so constricting that when conducting oversight on the rules, Iraqi inspectors "wreaked havoc with charges of corruption."252

As of July 7, 2007, the Ministry of Oil reported that it had spent 23% of its \$2.4 billion 2007 capital budget.²⁵³ A review of last year's Iraqi capital budget revealed a very poor capital expenditure rate in the oil sector; the Ministry of Oil has committed to improving budget execution in this sector.

IRRF

Just 9% of IRRF 2 funds were allocated to oil and gas reconstruction in Iraq. As of June 27, 2007, approximately \$1.46 billion of the sector's \$1.72 billion IRRF allocation had been expended.²⁵⁴ U.S. reconstruction officials reported that all IRRF construction projects in this sector are complete, and only infrastructure security projects remain underway (see Figure 2.45).255

IRRF construction projects included well workovers and gas oil separation plants (GOSPs) in the Rumaila oil fields, near Basrah. The IRRF also funded oil services projects in Iraq through the procurement of materials (such as water injection pumps for the southern oil fields), training, spare parts, service agreements, and capacity development.





Although it is one of the largest producers of crude oil in the world, Iraq must import kerosene, gasoline, diesel, and liquefied petroleum gas.

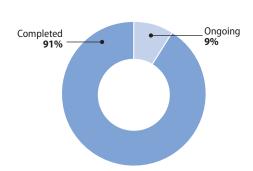
The major completed and ongoing IRRFfunded projects include:

- Qarmat Ali: Engineering and procurement work provided treated water for injection wells to maintain oil reservoir pressure.
- Al Basrah Oil Terminal (ABOT): Meter installation work continues, and work on the loading-arm refurbishment at berths 1-4 is complete. Last quarter, SIGIR inspected ABOT and found that refurbishment and repair work met the original objectives.
- Gas Oil Separation Projects: In the south, 12 gas oil separation plants were refurbished, with the potential to increase capacity by 600,000 BPD. In the north, eight were refurbished, with the potential to increase capacity by 300,000 BPD.
- Shuaiba Refinery Power Plant: Completed last year, this plant provides long-term power supply to Basrah Refinery.
- **South Well Workover:** Work is complete at 30 wells in the Basrah governorate to

Figure 2.45

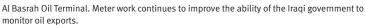
STATUS OF IRRF 2 PROJECTS - OIL AND GAS
TOTAL NUMBER OF PROJECTS: 46

Sources: IRMS, ITAO* Rollup (6/29/2007); USAID, Activities Report (7/12/2007)



Project Type	Not Started	Ongoing	Completed	Total
Southern Region Projects		3	11	14
Northern Region Projects			11	11
Water Injection Pump Station			9	9
Dedicated Power		1	5	6
LPG/LNG Plant Refurb			5	5
General Projects			1	1
Total		4	42	46





increase oil production capacity by more than 300,000 BPD.

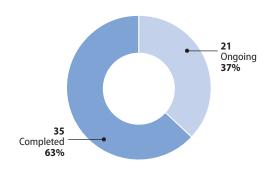
CERP

CERP FY 2006 and FY 2007 oil projects represent a small fraction of both total U.S. funds and total CERP funds spent in the oil sector in Iraq. Specifically, the sector received approximately \$30 million of CERP FY 2006 and FY 2007 funds—2% of the funds allocated to the oil sector in Iraq. This sector received only 3% of total CERP FY 2006 and FY 2007 funds.

Because all IRRF-funded construction projects in this sector are complete and IRRF funding for oil projects in Iraq is nearly expended, CERP represents a potential source of new U.S. funding for projects in the oil and gas sector. As Figure 2.46 shows, many CERP oil projects in Iraq average more than \$100,000 in value.

In 2005, four provinces had CERP oil and gas projects valued at more than \$200,000. In 2006, this proportion decreased slightly to three, although project values averaged more

Figure 2.46 STATUS OF CERP FY 2006 AND FY 2007 PROJECTS - OIL AND GAS **TOTAL NUMBER OF PROJECTS: 56** Source: MNC-I, Response to SIGIR (7/7/2007)





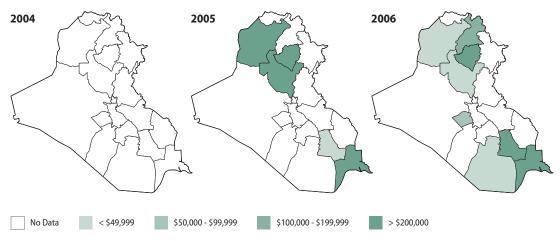
OIL AND GAS



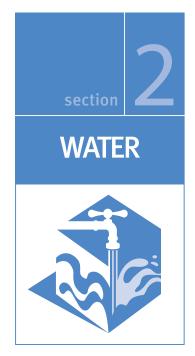
than \$500,000. This quarter, SIGIR announced a review of large CERP projects in Iraq, specifically those valued at more than \$400,000.

CERP FY 2006 and FY 2007 monies funded 56 oil projects across Iraq. The largest CERP oil projects occur in Basrah. Figure 2.47 shows the average value per CERP oil project by governorate in Iraq over the past three years.

Figure 2.47 **AVERAGE VALUE PER CERP OIL PROJECT BY GOVERNORATE** Source: IRMS, CERP Excel Workbook (6/29/2007)



Data is compiled using FY 2004, FY 2005, and FY 2006 CERP funds. The years indicated correspond to the actual start dates of the projects.



WATER

Before the 1991 Gulf War, most Iraqis had access to potable water—95% in urban areas and 75% in rural communities—and most urban areas had sanitation service. Access to clean water and sewerage declined after 1991, as a result of war damage and poor maintenance.256

By 2003, Iraq's irrigation network required extensive rehabilitation "after years of insufficient maintenance and funding."257 A 2003 UN/World Bank assessment estimated that reconstruction for Iraq's water and sewerage systems would cost more than \$6.8 billion,²⁵⁸ and more than \$1.5 billion for irrigation.²⁵⁹

Today, progress in the water sector is impeded by violence, a lack of trained facility workers, and inadequate maintenance practices. In Mosul, approximately 60% of homes and businesses have access to potable water.260 Although 75% of homes in Basrah have access to raw water, potable water must still be purchased.²⁶¹ Although the goal for Baghdad is to provide potable water for all homes and businesses, only 30% are connected to water distribution lines.²⁶²

Iraq's sewerage system also requires improvement: many cities lack updated sewerage systems and rely on septic systems. In Kirkuk²⁶³ and Samarra,²⁶⁴ streets and alleyways are used for open drainage. In Falluja, raw sewage spills out onto the streets and thus into water sources.²⁶⁵ In Najaf, 40% of homes are connected to sewage lines,266 and 50% of homes in Basrah are connected.²⁶⁷

This quarter, SIGIR conducted an inspection of the \$4.23 million Sadr City Al Qana'at Raw Water Pump Station project, which provides raw water for agricultural uses. This station will also be linked to a potable water plant. SIGIR found no construction deficiencies and determined that the project's quality control and quality assurance mechanisms were operating effectively. For more information on the assessment, see SIGIR Inspections in Section 3.



Al Qana'at Raw Water Pump Station.



U.S. Support

The water sector has received approximately \$2.38 billion in overall U.S. reconstruction funds.²⁶⁸ Water projects have received:

- 11.4% of all IRRF 2 funds
- nearly 25% of FY 2006 and FY 2007 CERP funds
- approximately 2% of FY 2006 ESF

For the allocation of funds in this sector, see Figure 2.48.

IRRF 2 has provided \$2.11 billion for water projects,²⁶⁹ improving access to potable water, sewerage, and irrigation. As of June 27, 2007, nearly 93% of IRRF 2 funding had been obligated, and 82% for water projects had been expended.270

Of the \$944 million in FY 2006 CERP, \$235 million fund water projects.²⁷¹ CERP money contributes 10% of the overall funding for the water sector.

ESF's O&M Sustainment program allocated approximately \$32 million for water.²⁷² GRD entered into an interagency agreement that fully committed 100% of the \$32 million. GRD reported \$6.29 million in contractual

Figure 2.48

ALLOCATIONS TO WATER

\$ Billions, % of \$2.38 Billion

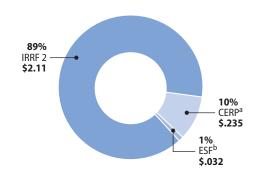
Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); IRMS, ESF Economic Track Summary (7/5/2007)



OBLIGATIONS FOR WATER

\$ Billions, \$2.20 Billion Total

Sources: DoS, Iraq Weekly Status (6/27/2007); MNC-I, Response to SIGIR (7/7/2007); ITAO, a Weekly Status Report (6/26/2007); IRMS, ESF Cost to Complete (7/5/2007)



Note: Numbers are affected by rounding. a. Allocation detail at the sector and subsector level for CERP is currently unavailable; therefore, the percentages for CERP are calculated using FY 2006 and FY 2007 dollars obligated. b. FY 2006 Supplemental Funds (P.L.109-234).



Note: Numbers are affected by rounding. a. By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO. b. FY 2006 and FY 2007.

c. FY 2006 Supplemental Funds (P.L. 109-234).



obligations, of which \$0.32 million has been expended.²⁷³ For the status of funds in this sector, see Figure 2.50.

The ESF Capacity Development and Technical Training program provided an additional \$15 million for water and sanitation projects.

Although progress has been made completing planned water projects, measuring the direct impact of U.S.-funded projects remains a challenge.

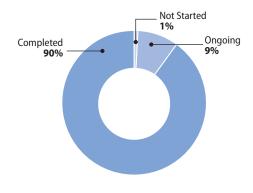
IRRF

As of June 29, 2007, a total of 1,095 IRRF water projects have been undertaken, with about 90% complete, 9% ongoing, and 1% yet to begin.²⁷⁴ For the status of projects in the water sector, see Figure 2.50.

Potable Water

U.S. projects valued at more than \$1.7 billion have provided "capacity for supplying potable water to approximately 2.5 million citizens who previously did not have access."275 As of July 1, 2007, potable water projects provided

Figure 2.50 STATUS OF IRRF 2 PROJECTS - WATER TOTAL NUMBER OF PROJECTS: 1,095 Sources: IRMS, ITAO* Rollup (6/29/2007); USAID, Activities Report (7/12/2007)



Note: Numbers are affected by rounding.
* By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.

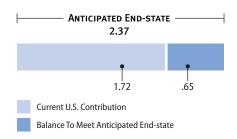
Project Type	Not Started	Ongoing	Completed	Total
Potable Water	3	89	901	993
Sewerage	3	9	55	67
Water Conservation			18	18
Pumping Stations and Generators		1	8	9
Other Solid Waste Management			3	3
Umm Qasr/Basrah Water Supply Project		1	1	2
Dam Repair, Rehabilitation and New Construction	on	1		1
Om Al-Iraq Canal Cleaning			1	1
Construct Eastern Euphrates Drain		1		1
Total	6	102	987	1,095



Figure 2.51

OUTPUT OF U.S. POTABLE WATER PROJECTS

Million Cubic Meters per Day Source: NEA, Response to SIGIR (7/13/2007)



approximately 1.72 million m³/day in additional system capacity, which is nearly 73% of the end-state goal.²76 The outputs of these IRRF-funded projects appear in Figure 2.51 which shows the current and anticipated capacity provided by completed water projects.

The goal of U.S. efforts is to provide potable water to 8.38 million Iraqis.²⁷⁷ To date, U.S. projects have provided capacity to supply potable water access to an estimated 5.86 million²⁷⁸ people—an increase from last quarter's 5.6 million and more than half the anticipated end-state. Figure 2.52 shows the additional capacity expected from these IRRF projects.

The United States continues to work to add capacity to the potable water system:

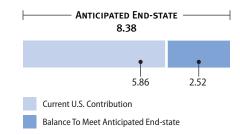
- Ba'quba Water Treatment Plant Sludge Pump Station serves 300,000 Iraqis in Diyala province.²⁷⁹
- Two water compact units in Ramadi and one in Salah al-Din province provide clean, potable water to approximately 41,500 residents.²⁸⁰
- Talha reverse osmosis water treatment plant in Basrah province serves more than 40,000 residents of the Talha district.²⁸¹

Figure 2.52

PEOPLE SERVED BY U.S. POTABLE WATER PROJECTS

Millions

Source: NEA, Response to SIGIR (7/13/2007)



In Kirkuk province, the Tal Adi Dhahab
 Water Project provides water to the city of
 Jubari, and the Nassir and Qahara Water
 Project supplies water to 1,500 residents.²⁸²

SIGIR reported in the April 2007 Quarterly Report that the **Nassriya Water Treatment Plant** project (estimated to cost \$276 million) would not be turned over to the Ministry of Municipalities and Public Works until enough Iraqis were trained to operate the facility. As of July, the Ministry had not yet trained a sufficient number of employees to operate the facility. During performance testing in June,²⁸⁴ the plant produced 2,100 m³/hour—only 21% of its 10,000 m³/hour capacity.²⁸⁵

SIGIR previously has highlighted the **Small Potable Water Program**, which is aimed at boosting potable water capacity in rural areas. Although 41 small water projects have been completed by local Iraqi companies, the target of 87 projects has not yet been achieved because security problems have hindered access to work sites.²⁸⁶



Figure 2.53

OUTPUT OF U.S. SEWERAGE PROJECTS

Million Cubic Meters per Day Source: NEA, Response to SIGIR (7/13/2007)

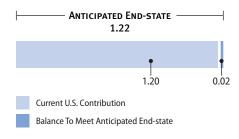
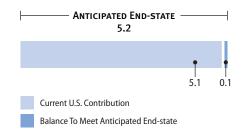


Figure 2.54

PEOPLE SERVED BY U.S. SEWERAGE PROJECTS

Source: NEA, Response to SIGIR (7/13/2007)



Sewerage

U.S. projects continue to produce at 1.20 million m³/day, which is 2% short of achieving the U.S. goal for additional sewage capacity.²⁸⁷ Figure 2.53 shows the current and anticipated status of additional sewerage capacity that U.S. projects have contributed to the system.

The United States has now completed 55 of 67 planned sewerage projects (82%).²⁸⁸ Three projects have yet to begin, and nine are ongoing.289

By July 13, 2007, 5.1 million additional people have been served by U.S. funded sewerage projects²⁹⁰—100,000 short of the goal. The anticipated end-state for service has been altered slightly since last quarter, which was revised from 5.3 million people to 5.2 million people. Figure 2.54 illustrates the current number of people served, compared with the new goal.

Last quarter, SIGIR noted that work on the Falluja Wastewater System was vulnerable because of the unstable security environment. The project, valued at \$49 million, will include a wastewater treatment plant and several pump stations.²⁹¹ Although ITAO reports that the

project will serve 228,000 people,²⁹² GRD estimates that only 75,000 people will be served initially.²⁹³ GRD says that reaching this quarter's construction goal is unlikely because of a "security shutdown and the impact of delayed approval of DFI invoices by GOI."294

Irrigation

On March 1, 2007, USACE handed construction of the Nassriya Drainage Pump Station over to the Ministry of Water Resources, with an estimated completion date of December 31, 2007.²⁹⁵ Until the March handover, the United States had invested approximately \$80 million in the project.²⁹⁶

As part of the transition of responsibility to the Iraqis, GRD and the Ministry signed a grant agreement in June 2007 with \$20 million in IRRF funding, which will partially support the project's remaining work.²⁹⁷ GRD reported that the agreement "allows the Iraqi Ministry to execute the procurement, administration, construction, management and quality assurance, under the oversight of GRD, for agreedupon construction projects."298 The arrangement is "structured such that the Ministry will





The water sector has received approximately \$2.38 billion in U.S. reconstruction funds.

be reimbursed for work completed according to a table of earned values previously agreed upon by both the Ministry and GRD."²⁹⁹

The Eastern Euphrates Drain Project is associated with the Nassriya Drainage Pump Station. It is partially funded by a grant agreement with the Ministry of Water Resources. Approximately 9% of the project is complete. The 15% completion target was not achieved because of issues arising from land disagreements.³⁰⁰

The anticipated target for additional irrigated or drained land is 387,000 hectares. The United States has reached 8% of that goal.³⁰¹ Figure 2.55 illustrates the anticipated end-state and current status of irrigation projects, measured in hectares.

CERP

CERP FY 2006 and FY 2007 water projects received approximately \$235 million—nearly 10% of the total (\$2.38 billion) reconstruction funds allocated for Iraq's water sector and 24% of the total FY 2006 and FY 2007 CERP funds (\$944 million).

As IRRF projects finish and IRRF funding is expended, CERP-funded projects are taking on a greater role in the water sector. The Multi-

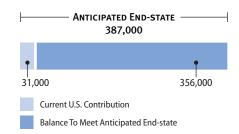
National Corps-Iraq (MNC-I) has undertaken 1,209 water projects with CERP FY 2006 and FY 2007 funds. Over the past three years in Iraq, the average value of CERP water projects has increased from approximately \$90,000 in 2004 to \$260,000 in 2006.

Figure 2.55

OUTPUT OF U.S. IRRIGATION PROJECTS

Hectare

Source: ITAO,* Weekly Status Report (7/10/2007)



^{*} By Executive Order, on May 8, 2007, the President created ITAO as the successor organization to the IRMO.



In 2005, a major reprogramming of IRRF dollars shifted money out of the water sector and into non-construction sectors. As a result, CERP FY 2006 and FY 2007 funds have been used to pay for water projects in Iraq. As the maps below show, 12 governorates have experienced a consistent increase in the average value of CERP water projects between 2004 and 2006. Baghdad has experienced the most consistent increase, from \$122,000 in 2004 to approximately \$450,000 in 2006. Anbar, Muthanna, Tameem, Babylon, Diyala, and Salah al-Din provinces also experienced consistent increases.

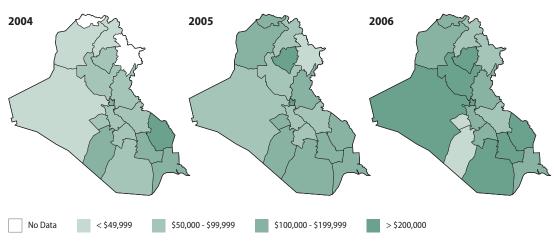
For the average value of CERP water projects by governorate, see Figure 2.56.

CERP water expenditures fund potable water, sanitary sewage, and storm-water systems projects in Iraq. As of July 7, 2007, CERP FY 2006 and FY 2007 has funded 420 ongoing and 789 completed projects.302 For the status of CERP water projects, see Figure 2.57.

ESF

As IRRF infrastructure projects near completion, the focus turns to building Iraq's capacity to maintain completed projects. ESF sustainment projects aim to strengthen Iraq's ability to maintain facilities and equipment. ESF is funding a total of 23 projects. None has been completed, nearly 22% are ongoing, and more than 78% have yet to start.³⁰³ Figure 2.58

Figure 2.56 **AVERAGE VALUE PER CERP WATER PROJECT BY GOVERNORATE** Source: IRMS, CERP Excel Workbook (6/29/2007)



Data is compiled using FY 2004, FY 2005, and FY 2006 CERP funds. The years indicated correspond to the actual start dates of the projects.



Figure 2.57

STATUS OF CERP FY 2006 AND FY 2007 PROJECTS WATER AND SANITATION

TOTAL NUMBER OF PROJECTS: 1,209 Source: MNC-I, Response to SIGIR (7/7/2007)

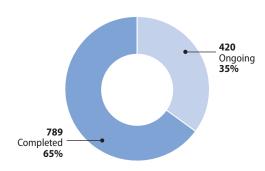
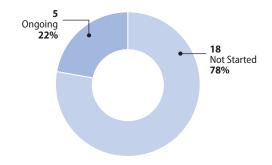


Figure 2.58 STATUS OF ESF* PROJECTS - WATER AND SANITATION

TOTAL NUMBER OF PROJECTS: 23 Source: IRMS, ESF Project Tracker (6/29/2007)



* Funded by the ESF FY 2006 Supplemental.

shows the status of O&M Sustainment projects in the water sector. The ESF-funded Provincial Reconstruction Team (PRT) program also conducts water projects.

Challenges in Sustainment

The inability of Iraq's water ministries to sustain projects continues to limit progress in the sector. The security situation is the "number one challenge faced by ministries today in executing their work."304 Deteriorating conditions are "increasingly affecting the ability of both the Ministry of Water Resources and the Ministry of Municipalities and Public Works to operate and has reached a crisis stage."305 Employees have vacated Baghdad buildings in dangerous locations, and "Ministry of Municipalities and Public Works officials estimate that less than half the remaining staff (those who have not fled the country) are showing up for work every day."306

The GOI has not allocated sufficient money for operations and maintenance (O&M); this affects sustainability. Iraqi ministries tend to focus on building facilities rather than maintaining them.307 For example, O&M was budgeted at 9% of the total funds ITAO recommended to the Ministry of Municipalities and Public Works in 2005 and 2006. Overall, however, the Ministry of Water Resources has adequate capacity to execute capital projects.308

Other factors hindering progress in the water sector include the lack of a well-established fee for service and the lack of a strong, customer-oriented focus. Performance could be improved by providing more funding for ministerial capacity development, an improved worker-compensation system, increased transparency and accountability, development of higher-quality services, and improved O&M.³⁰⁹

Another issue related to sustainability is the Water Sector Sustainment Program



(WSSP), which continues this quarter. Phase II was anticipated to be complete last quarter; GRD reports that Phase II is still ongoing but nearing completion.³¹⁰ Phase III is beginning and continues to support the program's emphasis on O&M in water and wastewater

facilities and rural water projects.311 On June 5, 2007, GRD awarded contracts for O&M support and training programs.³¹² Phase III will also add new projects coordinated by ITAO and in conjunction with Iraq's water ministries.313

WATER

